# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/752,607 | 12/27/2000 | William Williams | CSCO-96941 | 1311 |

| 7590 | 11/23/2004 |
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | |

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>07/04/09</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>27 December 2000</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on <u>10 February 2003</u> is: a)☒ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892) •

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

## DETAILED ACTION

This is in response to communication filed 07/09/04.

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 07/09/04 with amendments has been entered.

### *1.      Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

**2.      Claims 1, 2, 7, 12, 14, 15, 20 and 21 rejected under 35 U.S.C. 103(a) as being**

**unpatentable over Schutzman et al. (US 6505216) (Schutzman) in view of Duyanovich et al.**

**(US 5555371) (Duyanovich).**

Regarding claims 1, 12, 14 and 20, Schutzman discloses: a system and method and a

compute-

readable medium and an apparatus of archiving a database, comprising the steps of:

storing a plurality of archive logs[1] comprising a plurality of transactions on an

operational database (112, fig. 1 and col. 11, lines 25-35, Schutzman);

transmitting a plurality of asynchronous streams to a backup database[2] (col. 11, lines 25-

35, Schutzman), wherein the asynchronous streams correspond to a plurality of the archive logs

(col. 10, lines 53-63, Schutzman);

wherein the plurality of asynchronous streams correspond to a plurality of archive logs

(one stream for data portion, col. 11, lines 26-34, Schutzman), and wherein the plurality of

asynchronous streams are transmitted simultaneously (col. 11, lines 26-50, Schutzman);

However, Schutzman didn't disclose: Wherein a first asynchronous stream of said

plurality of asynchronous streams is transmitted at a first transmission rate and a second

asynchronous stream is transmitted at a second transmission rate and updating the backup

database with the plurality of transactions. On the other hand, Duyanovich discloses: Wherein a

first asynchronous stream of said plurality of asynchronous streams is transmitted at a first

transmission rate and a second asynchronous stream is transmitted at a second transmission rate

(col. 2, lines 27-45, Duyanovich) and updating the backup database with the plurality of

transactions (col. 2, lines 48-58, Duyanovich). Thus, at the time invention was made, it would

have been obvious to a person of ordinary skill in the art to include the steps the first and second

asynchronous stream are transmitted at a first and second transmission rate and updating the

backup database in the system of Schutzman as taught by Duyanovich. The motivation being to

enable the system provides for concurrent transfer of the different data streams queued and

executed at different rates, it is desired to minimize negative impacts on operation of primary and

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[1] Examiner interpreted the data portions as archive logs.
[2] The system concurrent transfer of the different data portions in to the backup storage device.

secondary data processing system by quickly retentively storing data (col. 2, lines 28-34,

Duyanovich).


In addition, Schutzman/Duyanovich discloses: a memory for storing instructions on how

data is to be transferred from the operational database to the backup database  (col. 13, lines 15-

20, Schutzman).


Regarding claims 2, 15 and 21, all the limitations of these claims have been noted in the

rejection of claims 1, 14 and 20, respectively. In addition, Schutzman/Duyanovich discloses:

wherein the plurality of asynchronous streams are transmitted simultaneously (col. 11, lines 26-

50, Schutzman).

Regarding claim 4, all the limitations of this claim have been noted in the rejection of

claim 1. in addition, Schutzman/Duyanovich discloses: further comprising the step of

transmitting a predetermined number of streams in parallel, wherein the number is set by a user

in a config file (col. 15, lines 33-48, Schutzman).

Regarding claim 6, all the limitations of this claim have been noted in the rejection of

claim 1. In addition, Schutzman/Duyanovich disclose:  further comprising the step of running

streaming rsynchs for copying data from the operational database to the backup database (col.

11, lines 26-50, , Schutzman).


Regarding claim 7, all the limitations of this claim have been noted in the rejection of

claim 1. In addition, Schutzman/Duyanovich discloses:  further comprising the step of

constructing an array of the plurality of archive logs which are to be transferred from the

operational database to the backup database (col. col. 11, lines 53-63, Schutzman).


3.      **Claims 8, 9, 11, 17, 18, 23 and 24 are rejected under 35 U.S.C. 103(a) as being**

**unpatentable over Ohran (U.S 6085298) in view of Schutzman et al. (US 6505216).**

Regarding claims 8, 17 and 23, Ohran discloses: A method and an apparatus of

performing automatic recoveries on an archived database, comprising the steps of:

comparing files residing on An operational database to files residing on a backup

database (col. 29, lines 26-40, Ohran);

determining whether there are any missing files by checking for files which exist on the

operational database and which do not exist on the backup database (col. 30, lines 15-38, Ohran);

recopying files from the operational database over to the backup database which are

missing (col. 30, lines 30-35, Ohran).

determining whether there are any corrupted files by checking for files which have a

different size on the operational database as compared to corresponding file residing on the

backup device (col. 30, lines 30-35, Ohran);

recopying files from the operational database to the backup database which have become

corrupted (col. 30, lines 30-35, Ohran);

However, Ohran didn't disclose: wherein the automatic recovery process is run by a

program automatically in the background without requiring initiation and is run independent of a

complete system backup.  On the other hand, Schutzman discloses: wherein the automatic

recovery process is run by a program automatically in the background without requiring

initiation and is run independent of a complete system backup (col. col. 11, lines 63 to col. 12,

lines 15, Schutzman). Thus, at the time invention was made, it would have been obvious to a

person of ordinary skill in the art to include automatic recovery process is run by a program

automatically in the background without requiring initiation in the system of Ohran as taught by

Schutzman. The motivation being to enable the system provides the ability to restore the

damaged portions of the file only greatly reduces the amount of time required to restore the

entire file (col. 12, lines 13-15, Schutzman).

Regarding claims 9, 18 and 24, all the limitations of these claims have been noted in the

rejection of claims 8, 17 and 23, respectively. In addition, Ohran/Schutzman discloses: further

comprising the step of transferring a plurality of files simultaneously from the host device to the

backup device (col. 11, lines 26-50, Schutzman).

Regarding claim 11, all the limitations of this claim have been noted in the rejection of

claim 8. in addition, Ohran/ Schutzman discloses: wherein the comparing step comprises the step

of performing a rolling checksum ( 553, 554, 555, 556, fig. 9 and corresponding text,

Schutzman).

**4.      Claim 3, 4, 6, 13, 16, 19 and 22  are rejected under 35 U.S.C. 103(a) as being**

**unpatentable over Schutzman et al. (US 6505216) (Schutzman) in view of Duyanovich et al.**

**(US 5555371) (Duyanovich) and further in view of Beardsley et al. (US 6304980)**

**(Beardsley).**

Regarding claims 3, 13,16 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 12, 14 and 21, respectively. However, Schutzman/Duyanovich didn't disclose: further comprising the steps of: comparing a plurality of files corresponding to the backup database to a plurality of files of the operational database to determine whether there are any corrupt or missing files. On the other hand, Beardsley discloses: further comprising the steps of comparing a plurality of files corresponding to the backup database to a plurality of files of the operational database to determine whether there are any corrupt or missing files (col. 20, lines 59 to col. 21, lines 13, Beardsley). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the steps of: comparing a plurality of files corresponding to the backup database to a plurality of files of the operational database to determine whether there are any corrupt or missing files in the combination system of Schutzman/Duyanovich as taught by Beardsley. The motivation being to enable the system to retransfer the data missing when transfer to backup database and avoid losing information when backup and recovery data in the file system when corrupt data occur by system crash.

In addition, Schutzman/Duyanovich /Beardsley discloses: automatically transferring files from the operational database to the backup database which have been corrupted or deleted (col. 11, lines 53-67, Schutzman)

Regarding claims 10 and 19, all the limitations of these claims have been noted in the rejection of claims 9 and 17, respectively. In addition, Schutzman/Ohran discloses: wherein the plurality of files are streamed according to an rsync command (col. 7, lines 1-19, Schutzman).

5.     Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schutzman et al. (US 6505216) (Schutzman) in view of Duyanovich et al. (US 5555371) (Duyanovich) and further in view of Nielsen (5812398).

Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 1. However, Schutzman didn't disclose: wherein the transmitting step runs in cron. On the other hand, Nielsen discloses: wherein the transmitting step runs in cron (col. 7, line 14 to col. 8, lines 11, Nielsen). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the transmitting step runs in cron in the combination system of Schutzman/Duyanovich as taught by Nielsen. The motivation being to enable the user to maintain the system which indicates that the backup routine should be run at specified intervals.

## 6.     Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this

application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240

for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should

be directed to the receptionist whose telephone number is 703-305-3900.

Cindy Nguyen
November 16, 2004

**FRANTZ COBY
PRIMARY EXAMINER**